



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Li, <i>et al.</i>	Examiner:	
Appl. No.:	10/649,951	Group Art Unit:	
Filed:	August 28, 2003	Docket No.:	70003.0002USD1
Title:	Symmetrically Disubstituted Aromatic Compounds and Pharmaceutical Compositions for Inhibiting Poly(ADP-ribose) Glycohydrolase, and Methods for Their Use		

---

**INFORMATION DISCLOSURE STATEMENT (37 C.F.R. § 1.97(b))**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form PTO-1449 are brought to the attention of the Examiner.

This statement should be considered because it is submitted within three months of the filing date of the above-identified application, which is not an application under 37 C.F.R. § 1.53(d). Accordingly, no fee is due for consideration of the items listed on the enclosed Form PTO-1449.

In accordance with 37 C.F.R. § 1.98(d), copies of the listed patents, publications or other information are not provided because they have previously been cited and submitted to the U.S. Patent and Trademark Office in parent application, U.S. Serial No. 09/829,827 filed on April 10, 2001, now U.S. Patent No. 6,635,786. Enclosed for the Examiner's information is a copy of the International Search Report. Applicants note references listed in the search report were previously cited to the Examiner.

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form PTO-1449, marked as being considered and initialed by the Examiner, to the undersigned with the next official communication.

It is believed that there are no fees required to submit this Information Disclosure Statement. However, the Commissioner is authorized to charge any fees to Deposit Account No. 13-2725, if necessary.

Respectfully submitted,  
MERCHANT & GOULD, P.C.

Dated: November 26, 2003

By: Mark J. Pino  
Mark J. Pino  
Registration No. 43,858

Merchant & Gould  
P.O. Box 2903  
Minneapolis, MN 55402-0903  
202-625-8380

<b>Customer No.</b> <b>29700</b>
-------------------------------------



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jia-He LI  
Examiner:  
Appl. No.: 10/649,951  
Group Art Unit:  
Filed: August 28, 2003  
Docket: 70003.0002USD1  
Title: SYMMETRICALLY DISUBSTITUTED AROMATIC COMPOUNDS AND  
PHARMACEUTICAL COMPOSITIONS FOR INHIBITING POLY(ADP-RIBOSE)  
GLYCOHYDROLASE, AND METHODS FOR THEIR USE

TRANSMITTAL SHEET

Mail Stop OIPE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

We are transmitting herewith the attached:

- ☒ Transmittal Sheet
- ☒ Information Disclosure Statement
- ☒ Form PTO-1449 citing 47 references
- ☒ Copy of International Search Report dated 2/27/2002
- ☒ Return postcard


It is believed there is no fee required to file the Information Disclosure Statement. However, the Commissioner is hereby authorized to charge any fees necessary to Deposit Account No. 13-2725.

Date: Nov. 26, 2003

By: Mark J. Pino  
Name: Mark J. Pino  
Registration No.: 43,858

MERCHANT & GOULD P.C.  
P.O. Box 2903, Minneapolis, MN 55402-0903  
202.625.8380

Customer No.  
29700

FORM 1449  INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 70003.0002USD1	Application Number: 10/649,951
	Applicant: Li et al.	
	Filing Date: August 28, 2003	Group Art Unit:

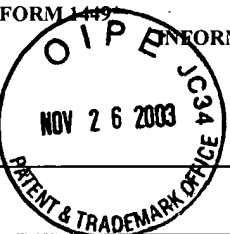
U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	3,817,992	06/18/1974	Sill et al.	260	240.1	
	3,859,286	01/07/1975	Fleming et al.	260	247.5	
	3,867,531	02/18/1975	Shemano	424	248	
	3,890,328	06/17/1975	Palopoli et al.	260	293.62	
	3,907,791	09/23/1975	Albrecht et al.	260	246	
	3,937,833	02/10/1976	Shemano	514	316	
	3,937,835	02/10/1976	Shemano	424	275	
	3,947,593	03/30/1976	Shemano	424	330	
	3,957,989	05/18/1976	Fleming et al.	424	248	
	4,008,240	02/15/1977	Sill et al.	260	293.58	
	4,041,165	08/09/1977	Shemano	424	267	
	4,118,232	10/03/1978	Piller et al.	96	99	
	5,521,160	05/28/1996	Chucholowski et al.	514	42	
	5,587,384	12/24/1996	Zhang et al.	514	309	

FOREIGN PATENT DOCUMENTS							
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	DE 1950972	4/16/1970	Germany				X
	JP 03 174540	7/29/1991	Japan				X
	WO 99/11645	3/11/1999	PCT				
	JP 10-101591	04/21/1998	Japan				X

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
		Albrecht et al., "Bis-Basic-Substituted Aromatic Compounds. A New Class of Antiviral Agents. 3. 2,7-Bis(aminoacyl)fluorenes and -flourenones," <i>J. Med. Chem.</i> , 17(8):886-889 (1974).
		Albrecht et al., "Bis-Basic-Substituted Aromatic Compounds. A New Class of Antiviral Agents. 6. Bis-Basic-Substituted Flouranthenes," <i>J. Med. Chem.</i> , 17(11):1150-1156 (1974).
		Alvarez-Gonzalez et al., "Poly(ADP-ribose) Catabolism in Mammalian Cells Exposed to DNA-damaging Agents," <i>Mutat. Res.</i> , 218(2):67-74 (1989).

**Customer No.**  
**29700**

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.	

FORM 1449  INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 70003.0002USD1	Application Number: 10/649,951
	Applicant: Li et al.	
	Filing Date: August 28, 2003	Group Art Unit:

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
		Aoki et al., "Novel Inhibitors of Poly(ADP-ribose) Glycohydrolase," <i>Biochim. Biophys. Acta</i> , 1158(3):251-256 (1993).
		Aoki et al., "A Macrocircular Ellagitannin, Oenothien B, Suppresses Mouse Mammary Tumor Gene Expression via Inhibition of Poly(ADP-ribose) Glycohydrolase," <i>Biochem. Biophys. Res. Comm.</i> , 210(2):329-337 (1995).
		Cain et al., Potential Antitumor Agents. IX. Bisquaternary Salts," <i>J. Med. Chem.</i> , 11(5):963-966 (1968).
		Campbell et al., "The Friedel-Crafts Reaction of Fluoranthene," <i>J. Chem. Soc.</i> , pp. 1404-1406 (1951).
		Cosi et al., "Decreases in Mouse Brain NAD <sup>+</sup> and ATP induced by 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP): Prevention by the Poly(ADP-ribose) Polymerase Inhibitor, Benzamide," <i>Brain Research</i> , 809(1):58-67 (1998).
		DiCioccio et al., Inhibition of Deoxynucleotide-Polymerizing Enzyme Activities of Human Leukemia Lymphoblasts and Simian Sarcoma Virus by Tilorone and Thirteen of Its Analogs," <i>J. Natl. Cancer Inst.</i> , 60(3):533-536 (1978).
		Dünnwald et al., "Non-ionic Template Synthesis of Amide-linked Rotaxanes: Axles with Benzophenone and Cinnamic Acid Units," <i>Synthesis</i> , 3:339-348 (1998).
		Ferranti et al., "Amidinoderivati Del 9H-Fluorene," <i>Farmaco, Ed., Sci.</i> , 37:199-204 (1982).
		Ha, et al., "Poly(ADP-ribose) Polymerase-1 in the Nervous System," <i>Neurobiology of Disease</i> , 7(4):225-239 (2000).
		Handrock, K. et al., "Drug-induced Lysosomal Storage of Sulfated Glycosaminoglycans. Studies on the Underlying Structure-Activity Relationships," <i>Toxicology</i> , 85(2-3):199-213 (1993).
		Hatakeyama et al., "Purification and Characterization of Poly(ADP-ribose) Glycohydrolase," <i>J. Biol. Chem.</i> , 261(32):14902-14911 (1986).
		Hein et al., "Mucopolysaccharidosis and Lipidosis in Rats Treated with Tilorone Analogues," <i>Toxicology</i> , 58(2):145-154 (1989).
		Levine et al., "T-Lymphocyte Depletion Induced in Rats by Analogs of Tilorone Hydrochloride," <i>Toxicol. Appl. Pharmacol.</i> , 40(1):137-145 (1977).
		Maruta et al., "Characterization of Two Forms of Poly(AD-ribose) Glycohydrolase in Guinea Pig Liver," <i>Biochem.</i> , 30(24):5907-5912 (1991).
		Olofson, et al., "Tests of a Piperidino Mask for the Protection of Functionalized Carbon Sites in Multistep Syntheses," <i>J. Org. Chem.</i> , 49(15):2795-2799 (1984).
		Ramsinghani et al., "Syntheses of Photoactive Analogues of Adenosine Diphosphate (Hydroxymethyl)pyrrolidinediol and Photoaffinity Labeling of Poly(ADP-ribose) Glycohydrolase," <i>Biochem.</i> , 37(21):7801-7812 (1998).
		Schafer et al., "Inhibition of Rauscher Leukemia Virus and Avian Myeloblastosis Virus DNA Polymerases by Tilorone (NSC-143969) and its Analogs," <i>Cancer Chemother. Rp.</i> , 58(6):821-827 (1974).
		Slama et al., "Specific Inhibition of Poly(ADP-ribose) Glycohydrolase by Adenosine Diphosphate (Hydroxymethyl)pyrrolidinediol," <i>J. Med. Chem.</i> , 38(2):389-393 (1995).
		Slama et al., "Mechanism of Inhibition of Poly(ADP-ribose) Glycohydrolase by Adenosine Diphosphate (Hydroxymethyl)pyrrolidinediol," <i>J. Med. Chem.</i> , 38(21):4332-4336 (1995).
		Sutcliffe et al., "The Synthesis and Properties of Dyes and Pigments Containing a 9,9' -Spirobifluorene Residue," <i>Journal of The Society of Dyers and Colourists</i> , 94:306-309 (1978).
		Tavassoli et al., "Effect of DNA Intercalators on Poly(ADP-ribose) Glycohydrolase Activity," <i>Biochim. Biophys. Acta</i> , 827(3):228-234 (1985).

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.	

A circular stamp from the Office of Intellectual Property (OIP). The text "OIP" is at the top, "JCSA 35" is on the right, "NOV 26 2003" is in the center, and "PATENT & TRADEMARK OFFICE" is at the bottom.[illegible]

**Customer No.**  
**29700**

\*Substitute Disclosure Statement Form (PTO-1449)